

## Human Computer Interaction CS449 – CS549

### Group Assignment- User Based Usability Testing of a Gesture Based Interactive System

#### This is a **group assignment**

**Due date** – One of the group members must upload group report to SUCourse by December 16<sup>th</sup> Monday, (**Late submission will not be accepted**)

**Grading:** 20 points

**Aim:** The main objective of this assignment is to make students familiar with conducting end user-based usability testing.

**Task:** In this assignment, you will conduct usability testing of the Assignment-5 system with real users. The users will use the application and give feedback regarding their experiences. You must evaluate the usability of it and also evaluate factors contributing to its use and identify the usability issues of this application in gesture based interaction.

#### **Important Points:**

- 1-Try the application within your group first. Be familiar with the application and the test procedure. Conduct a pilot test.**
- 2- Users:** Prepare persona(s) for your target user group. Find **minimum 5 users** to test application (more is better). Keep gender and background balance. Make sure they have **no** previous gesture based interaction experience. Before the test, collect demographics data from each user.
- 3- Activity:** Ask the users use the application as if they are alone.
- 4- Context:** Conduct the test in a quiet place
- 5- Tool:** Conduct the test with the same device for all users.
- 6- Before the test process:** Inform users about the process and think aloud protocol (We did a demo in class, See course notes)
- 7- During the test (Quantitative and Qualitative data):** Record reactions of users during the test (I mentioned Quan and Qual data collection in the class. Check lecture notes)
- 8- Post test interview (Qualitative data):** Prepare interview questions to compare and assess the level of users' experiences in the application. Evaluate factors contributing to usability and identify usability issues in creating a smooth experience.
- 9- Post-test (Quantitative data):** Ask subjects to complete SUS (System Usability Scale). Use English version of it. (It is on SuCourse)

The user-based usability test analysis must be reported under the following headers (Use those headings in your report):

**Names of all group members**

**1- Methodology (15 pts)**

Report the test methodology in detail (you may use tables if you want). If someone wants to replicate your study, there should not be any missing info. Present persona(s).  
**Add photos from user testing sessions of all end-users. (This is different than persona!)**

Users: Report demographics of all end-users who tested the applications. (Demographics (age, gender, etc), experience with games, experience with gesture based interaction, their department, etc.)

Test procedure: What you did before, during and after the test.

Task procedure: Explain the task procedure, how they completed tasks.

Context: Explain the context of the study

Tool: Explain specs of device you used

**2- Results (30 pts)**

Report data collected During the tests (Quantitative and Qualitative data)

Report Post test interview (Qualitative data) results.

Report Post-test questionnaire-SUS (Quantitative data) results.

Don't forget to add narrative explanation!

**3- Discussion and Conclusion (47 pts)**

What data tell us about the applications.

What are the usability issues? Why?

How can you improve the system based on the feedback from the users?

Discuss your findings with the related HCI literature.

What are the limitations of the study?

**4 References (3 pts)**

**Peer evaluation (5 pts) – This will be requested from each group member separately and the grades will be confidential.**